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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/675,730

09/30/2003

Saul C. Blum

RDH-0312

6351

7590

02/24/2005

ExxonMobil Research and
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EXAMINER

FRANK, RODNEY T

ART UNIT

PAPER NUMBER

2856

DATE MAILED: 02/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/675,730	BLUM ET AL.	
	Examiner	Art Unit	
	Rodney T. Frank	2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5 and 7-9 is/are rejected.
- 7) ☒ Claim(s) 2 and 6 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

1. Claim 2 is objected to because of the following informalities: The claim currently reads: The apparatus of claim 1 wherein said container includes an insulated column and said lower region is a flask is in open communication with said insulated column and said upper region is a condenser is in open communication with said insulated column. The examiner feels that the phrases “is a flask is in open communication with” and “a condenser is in open communication with” are confusing and need to be corrected. The examiner would suggest either removing the “is” between “flask” and “in” and the “is” between “condenser” and “in”, or insert a –which— between “flask” and “is” and between “condenser” and “is”. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-5, and 7-9 are rejected under 35-U.S.C. 103(a) as being unpatentable over Draper et al. (U.S. Patent Number 4,640,233; hereinafter referred to as Draper). Draper discloses an improved model steam generator for simulating the conditions within a nuclear steam generator in order to monitor the condition of the heat exchange tubes and tubesheet of the nuclear steam generator is disclosed herein. The improved model steam generator includes a highly effective separator assembly for separating water droplets entrained within the steam flowing out of the outlet of the secondary side of the generator formed from a plurality of

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separator grids, each of which includes an array of semi-cylindrical deflector members. The grids are vertically stacked with the deflector members transversely disposed to the flow of steam generated by the model steam generator. Each of the parallel arrays of deflector members in each grid is angularly disposed approximately 45.degree. to the deflector members in the grids above it and below in order to provide a tortuous path for the flow of steam ascending therethrough. The separator assembly removes proportionately more water droplets from the steam generated by the model steam generator, which in turn allows it to accurately simulate the sludge accumulation characteristics of the nuclear steam generator being monitored. The model steam generator also includes a bankable condenser assembly which greatly enhances its turn-down ratio, as well as a feedwater pre-heater which allows it to accurately simulate the thermohydraulic conditions at a variety of points on the tubesheet of the nuclear steam generator (Please see the abstract).

With regard to claim 1, Draper discloses and shows in the figures an apparatus for simulating corrosion activity in liquid and vapor/condensate corrosion environments comprising a container (figure 1B), including a lower region containing said liquid (figure 1B, primary side 102) and an upper region (figure 1B, secondary side 300). Though the upper region has a condenser attached directly to it (figure 1C, item 400), and not specifically included, since the condenser is attached directly, in operation, the examiner feels that this would still perform/operate no different than a section that would include a condenser directly. Therefore, the specific orientation of the condenser as claimed would have been obvious to one of ordinary skill in the art at the time of the invention since Draper teaches a condenser. Including the condenser in the upper region would be deemed as advantageous in order to provide a more

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compact unit. The device of Draper further includes a heater for providing heat to said lower region such that said liquid is maintained at a given temperature (see figure 1B, heater assembly 150), a vacuum pump is not specifically disclosed, but a vacuum source (column 15 lines 59-63) is disclosed for providing a partial vacuum at a given pressure in said upper region of said container, there are disclosed 4 different corrosion probes, items 258a-d, used to test corrosion (see column 17 lines 23-28), which are removeably positioned in the assembly. By the disclosure of column 6 lines 11-45 would indicate that the tubes are positioned both in liquid, and above the liquid, as claimed.

With regard to claims 3 and 4, column 15 lines 59-63 as well as figure 1B show a means to provide nitrogen (Figure 1B item 204). Since Nitrogen is an inert gas, then the limitations of these two claims are disclosed.

With regard to claim 5, beginning in column 21 with line 38 and continuing through column 23 line 58, there is a procedure described in detail whereby the condenser is cooled by water. This is further shown in figure 1C.

With regard to claim 7, the use of a thermocouple to monitor liquid temperature is shown in column 10 lines 21-25 and again in column 16 lines 58-66.

With regard to claim 8, though a mechanical vacuum pump is not explicitly disclosed, a mechanical vacuum pump would be a well known vacuum source to one of ordinary skill in the art and since Draper does not disclose the specific vacuum source used, then any one suitable, such as a mechanical vacuum pump, would be within the spirit of the disclosure of Draper.

With regard to claim 9, column 26 lines 31-36 disclose that certain water types allow for the testing of the efficiency of anti-corrosive additives.

Allowable Subject Matter

4. Claims 2 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney T. Frank whose telephone number is (571) 272-2193. The examiner can normally be reached on M-F 9am -5:30p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

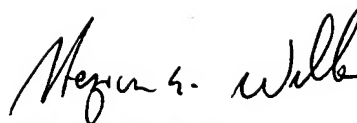
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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February 17, 2005

A handwritten signature in black ink, appearing to read "Hezron Williams", with a long, sweeping horizontal line extending to the right.

HEZRON WILLIAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800